IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1(Previously presented). A liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix, and a source driver and a gate driver that drive the active matrix circuit; and

an opposing substrate comprising an opposing electrode,

wherein the liquid crystal display device is characterized as:

performing display by optically compensated bend mode; and

conducting voltage gray scale and time ratio gray scale at the same time by using n bit out of m bit digital data as information for voltage gray scale, and (m-n) bit as information for time ratio gray scale, wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n.

2 (Canceled).

3(Previously presented). A liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix, and a source driver and a gate driver that drive the active matrix circuit;

an opposing substrate comprising an opposing electrode; and

a circuit which converts m bit digital video data into n bit digital video data and provides the n bit digital video data to the source driver, wherein m and n are positive numbers equal to or greater

than 2 and satisfy m>n,

wherein the liquid crystal display device is characterized as:

forming an image for one frame comprising 2^{m-n} subframes by performing voltage gray scale and time ratio gray scale that uses (m-n) bit at the same time, and;

applying voltage which makes an orientation of liquid crystal to a bend orientation on starting display of the 2^{m-n} subframes.

4 (Canceled).

5 (Previously presented). A liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix, and a source driver and a gate driver that drive the active matrix circuit; and

a circuit which converts m bit digital video data into n bit digital video data and provides the n bit digital video data to the source driver, wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n,

wherein the liquid crystal display device is characterized as:

forming an image for one frame comprising 2^{m-n} subframes by performing voltage gray scale method and time ratio gray scale that uses (m-n) bit at the same time; and

applying voltage which makes an orientation of liquid crystal to a bend orientation on starting display of the frame which comprises 2^{m-n} subframes.

6 (Canceled).

7(Original). A liquid crystal display device according to claim 1, wherein the positive number m is 10 and the positive number n is 2.

8 (Canceled).

9 (Original). A liquid crystal display device according to claim 3, wherein the positive number m is 10 and the positive number n is 2.

10 (Canceled).

11 (Original). A liquid crystal display device according to claim 5, wherein the positive number m is 10 and the positive number n is 2.

12 (Canceled).

13 (Original). A liquid crystal display device according to claim 1, wherein the positive number m is 12 and the positive number n is 4.

14 (Canceled).

15 (Original). A liquid crystal display device according to claim 3, wherein the positive number m is 12 and the positive number n is 4.

16 (Canceled).

17 (Original). A liquid crystal display device according to claim 5, wherein the positive number m is 12 and the positive number n is 4.

18 (Canceled).

19 (Original). A rear projector which comprises 3 liquid crystal display devices according to claim 1.

20 (Canceled).

21 (Original). A rear projector which comprises 3 liquid crystal display devices according to claim 3.

22 (Canceled).

23 (Original). A rear projector which comprises 3 liquid crystal display devices according to claim 5.

24 (Canceled).

25 (Original). A front projector which comprises 3 liquid crystal display devices according to

claim 1.

26 (Canceled).

27 (Original). A front projector which comprises 3 liquid crystal display devices according to claim 3.

28 (Canceled).

29 (Original). A front projector which comprises 3 liquid crystal display devices according to claim 5.

30-48 (Canceled).

49 (Original). A notebook type personal computer which comprises a liquid crystal display device according to claim 1.

50. (Canceled)

51(Original). A notebook type personal computer which comprises a liquid crystal display device according to claim 3.

52 (Canceled)

53 (Original). A notebook type personal computer which comprises a liquid crystal display device according to claim 5.

54. (Canceled)

55(Previously presented). A liquid crystal display device comprising:

a first substrate;

a plurality of pixel thin film transistors disposed in a matrix form over the substrate;

a source driver operationally connected to said plurality of pixel thin film transistors;

an opposing substrate provided with an opposing electrode; and

a liquid crystal layer interposed between the first substrate and the opposing electrode, said liquid crystal layer having a p cell structure; and

a digital video data time ratio gray scale processing circuit, operationally connected to said source driver,

wherein a m bit digital video data inputted to the digital video data time ratio gray scale processing circuit is converted into an n bit digital video data for voltage gray scale while (m - n) bit data of the m bit digital video data is used for time ratio gray scale.

56 (Previously presented). The liquid crystal display device according to claim 55 wherein said liquid crystal display device is operated in an OCB mode.

57(Previously presented). A method of driving a liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix, and a source driver and a gate driver that drive the active matrix circuit; and

an opposing substrate comprising an opposing electrode;

wherein the method of driving the liquid crystal display device is characterized as:

performing display by optically compensated bend mode, and

conducting voltage gray scale and time ratio gray scale at the same time by using n bit out of m bit digital data as information for voltage gray scale, and (m-n) bit as information for time ratio gray scale, wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n.

58(Previously presented). A method of driving a liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix, and a source driver and a gate driver that drive the active matrix circuit;

an opposing substrate comprising an opposing electrode; and

a circuit which converts m bit digital video data inputted from the external into n bit digital video data and provides the n bit digital video data to the source driver, wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n,

wherein the method of the liquid crystal display device is characterized as:

forming an image for one frame comprising 2^{m-n} subframes by performing voltage gray scale and time ratio gray scale that uses (m-n) bit at the same time, and;

applying voltage which makes an orientation of liquid crystal to a bend orientation on starting display of the 2^{m-n} subframes.

59 (Previously presented). The liquid crystal display device according to claim 1 wherein said active matrix substrate further comprises an opposing electrode driving circuit.

60(Previously presented). The liquid crystal display device according to claim 3 wherein said active matrix substrate further comprises an opposing electrode driving circuit.

61(Previously presented). The liquid crystal display device according to claim 5 wherein said active matrix substrate further comprises an opposing electrode driving circuit.

62(Previously presented). The liquid crystal display device according to claim 55 wherein an opposing electrode driving circuit is provided at the substrate.

63(Previously presented). The method of driving the liquid crystal display device according to claim 57 wherein said active matrix substrate further comprises an opposing electrode driving circuit.

64(Previously presented). The method of driving the liquid crystal display device according to claim 58 wherein said active matrix substrate further comprises an opposing electrode driving circuit.

65(Previously presented). An electronic device having the liquid crystal display device according to claim 1, wherein said electronic device is selected from the group consisting of a mobile

telephone, a video camera, a mobile computer, a portable book, a player using a recording medium, a digital camera, and a display.

66(Previously presented). An electronic device having the liquid crystal display device according to claim 3, wherein said electronic device is selected from the group consisting of a mobile telephone, a video camera, a mobile computer, a portable book, a player using a recording medium, a digital camera, and a display.

67(Previously presented). An electronic device having the liquid crystal display device according to claim 5, wherein said electronic device is selected from the group consisting of a mobile telephone, a video camera, a mobile computer, a portable book, a player using a recording medium, a digital camera, and a display.

68(Previously presented). An electronic device having the liquid crystal display device according to claim 55, wherein said electronic device is selected from the group consisting of a mobile telephone, a video camera, a mobile computer, a portable book, a player using a recording medium, a digital camera, and a display.

69 (Previously presented). A liquid crystal display device according to claim 1, wherein a display gray scale level is obtained by totaling gray scale voltage levels in sub-frame terms of one frame and then averaging totaled gray scale voltage levels by said time ratio gray scale.

70 (Previously presented). A liquid crystal display device according to claim 3, wherein a

display gray scale level is obtained by totaling gray scale voltage levels in sub-frame terms of one frame and then averaging totaled gray scale voltage levels by said time ratio gray scale.

71 (Previously presented). A liquid crystal display device according to claim 5, wherein a display gray scale level is obtained by totaling gray scale voltage levels in sub-frame terms of one frame and then averaging totaled gray scale voltage levels by said time ratio gray scale.

72 (Previously presented). A liquid crystal display device according to claim 55, a display gray scale level is obtained by totaling gray scale voltage levels in sub-frame terms of one frame and then averaging totaled gray scale voltage levels by said time ratio gray scale.

73 (Previously presented). A liquid crystal display device according to claim 57, a display gray scale level is obtained by totaling gray scale voltage levels in sub-frame terms of one frame and then averaging totaled gray scale voltage levels by said time ratio gray scale.

74(Previously presented). A liquid crystal display device according to claim 58, a display gray scale level is obtained by totaling gray scale voltage levels in sub-frame terms of one frame and then averaging totaled gray scale voltage levels by said time ratio gray scale.

75(Previously presented). A liquid crystal display device comprising:

an active matrix circuit including a plurality of pixel TFTs;

an active matrix substrate including a source driver and a gate driver that control the active matrix circuit;

an opposing substrate having an opposing electrode;

a liquid crystal interposed between the active matrix substrate and the opposing substrate; and

a circuit converting a video data into a digital video data for a gradation display using voltage gray scale and time ratio gray scale;

wherein the source driver has a circuit converting the digital video data to an analog video data.

76(Previously presented). A liquid crystal display device according to claim 75, wherein the video data is a first digital video data and the digital video data is a second video data.

77(Previously presented). A liquid crystal display device comprising:

an active matrix circuit including a plurality of pixel TFTs;

an active matrix substrate including a source driver and a gate driver that drive the active matrix circuit;

an opposing substrate having an opposing electrode;

a liquid crystal interposed between the active matrix substrate and the opposing substrate;

a circuit converting an first analog video data to a first digital video digital data;

a circuit converting the first digital video digital data into a second digital video data for a gradation display using voltage gray scale and time ratio gray scale; and

a circuit converting the second digital video data to an second analog video data.

78(Previously presented). A liquid crystal display device according to claim 76,

wherein the first video data has m bit;

wherein n bit video data is used to the voltage gray scale and (m-n) bit first video data is used

to the time gray scale; and

wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n.

79(Previously presented). A liquid crystal display device according to claim 77,

wherein the first video data has m bit;

wherein n bit video data is used to the voltage gray scale and (m-n) bit first video data is used to the time gray scale; and

wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n.

80-83 (Canceled).

84(Previously presented). A display comprising the liquid crystal display device according to claim 75.

85(Previously presented). A display comprising the liquid crystal display device according to claim 77.

86(Previously presented). A display according to claim 75, wherein the display has a diagonal greater than 10 inches.

87(Previously presented). A display according to claim 77, wherein the display has a diagonal greater than 10 inches.

88(Previously presented). A display according to claim 75, wherein the display has a diagonal greater than 30 inches.

89(Previously presented). A display according to claim 77, wherein the display has a diagonal greater than 30 inches.

90(Previously presented). A projector comprising the liquid crystal display device according to claim 75.

91(Previously presented). A projector comprising the liquid crystal display device according to claim 77.

92-95 (Canceled).

96(Previously presented). A computer comprising the liquid crystal display device according to claim 75.

97(Previously presented). A computer comprising the liquid crystal display device according to claim 77.

98(Previously presented). A method for driving a liquid crystal display device comprising:

an active matrix circuit including a plurality of pixel TFTs;

a source driver and a gate driver controlling the active matrix circuit;

a liquid crystal; and

a circuit converting a first digital video data into a second digital video data for a gradation display using voltage gray scale and time ratio gray scale;

wherein the source driver converts the second digital video data to an analog video data; and supplies the analog video data to the active matrix circuit; and

wherein the active matrix circuit forms an image comprising one frame using a plurality of subframes based on the analog video data.

99(Previously presented). A method for driving a liquid crystal display device comprising:

an active matrix circuit including a plurality of pixel TFTs;

a source driver and a gate driver controlling the active matrix circuit;

a liquid crystal;

a circuit converting a first analog video data to a first digital video data;

a circuit converting the first digital video data into a second digital video data for a gradation display using voltage gray scale and time ratio gray scale; and

a circuit converting the second digital video data to a second analog video data;

wherein the source driver supplies the second analog video data to the active matrix circuit; and

wherein the active matrix circuit forms an image comprising one frame using a plurality of subframes based on the second analog video data.

100(Previously presented). A method for driving a liquid crystal display device according to claim 98,

wherein the first video data has m bit;

wherein n bit video data is used to the voltage gray scale and (m-n) bit first video data is used to the voltage gray scale; and

wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n; and

wherein the number of the subframes is $2^{(m-n)}$.

101(Previously presented). A method for driving a liquid crystal display device according to claim 99,

wherein the first video data has m bit;

wherein n bit video data is used to the voltage gray scale and (m-n) bit first video data is used to the voltage gray scale; and

wherein m and n are positive numbers equal to or greater than 2 and satisfy m>n; and

wherein the number of the subframes is $2^{(m-n)}$.

102(Previously presented). A method for driving a liquid crystal display device according to claim 98,

wherein the liquid crystal display device comprises an opposing electrode driving circuit;

wherein the active matrix circuit includes a pixel electrode; and

wherein the source driver applies a voltage to the pixel electrode, and the opposing electrode driving circuit applies a voltage to the opposing electrode to make an orientation of the liquid crystal to a bend orientation when at least one of the 2^{m-n} subframes starts.

103(Previously presented). A method for driving a liquid crystal display device according to

claim 99,

wherein the liquid crystal display device comprises an opposing electrode driving circuit;

wherein the active matrix circuit includes a pixel electrode; and

wherein the source driver applies a voltage to the pixel electrode, and the opposing electrode driving circuit applies a voltage to the opposing electrode to make an orientation of the liquid crystal to a bend orientation when at least one of the 2^{m-n} subframes starts.

104(Previously presented). A method for driving a liquid crystal display device according to claim 102,

wherein the direction of an electro field supplied to the liquid crystal is reversed whenever the subframes start.

105(Previously presented). A method for driving a liquid crystal display device according to claim 103,

wherein the direction of an electro field supplied to the liquid crystal is reversed whenever the subframes start.

106-107 (Canceled).